

## REMARKS

### Entry of Amendment and IDS

As Applicants are filing a RCE herewith, this amendment and the accompanying IDS should be entered and considered by the Examiner at this time.

Applicants have the following response to the Examiner's only rejection in the Final Rejection.

### Claim Rejections - 35 USC §103

In the Final Rejection, the Examiner continues to reject Claims 1-15 under 35 USC §103(a) as being unpatentable over Peng (US 2005/0062405) in view of Ishihara et al. (US 2003/0048072). This rejection is respectfully traversed.

While Applicants traverse this rejection, in order to advance the prosecution of this application, Applicants are amending independent Claims 1-4, 6 and 10-13 to recite that the first layer contains *both* an aromatic amine (which is a substance that transports a hole easily) *and* molybdenum oxide (which is a substance with an electron accepting property)<sup>1</sup>. These features are supported throughout the specification of the present application.

As the Examiner admits, Peng fails to teach the specific properties of the hole and electron transport layers and both injection and transport layers as recited in the claims. The Examiner contends that Ishihara teaches a layer containing a substance that transports a hole easily and a substance with an electron accepting property. In addition, the Examiner contends

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<sup>1</sup> Applicants are also canceling Claims 5, 7 and 14, without prejudice or disclaimer. Applicants are also amending the claims to correct minor informalities therein.

that Ishihara further discloses the substance with the electron accepting property is molybdenum oxide.

In contrast to the claimed invention, Ishihara does not disclose or suggest a first layer containing both an aromatic amine and molybdenum oxide, as recited in independent Claims 1-4, 6 and 10-13. Therefore, even if it were proper to combine Peng and Ishihara (which Applicants do not admit), the combination still does not disclose or suggest this claimed feature of independent Claims 1-4, 6 and 10-13, and Claims 1-4, 6, 10-13.

Therefore, independent Claims 1-4, 6, 10-13 and those claims dependent thereon are not disclosed or suggested by the cited references and are patentable over these references. Accordingly, it is respectfully requested that this rejection be withdrawn.

#### Response To Arguments

On pages 2-3 of the Final Rejection, the Examiner has a “Response To Arguments.” Applicants have the following comments in reply thereto:

(a) In response to Applicants’ argument that Ishihara fails to teach a substance that transports a hole easily and a substance with an electron accepting property, the Examiner argues that “[t]his argument is not persuasive because [0048] of Ishihara states, “the hole injection layer has a role of carrying holes [i.e., hole transporting]...it preferably has a high hole mobility...and low in ionization potential [i.e., high electron accepting property]...”. Applicants respectfully submit that this analysis is incorrect.

More specifically, the Examiner recognizes the role of carrying holes as the hole transporting ability, for which Applicants agree. However, the Examiner also contends that low ionization potential means a high electron accepting property. This is incorrect. The ionization

potential corresponds to the HOMO level of a material and strongly relates to the ability of a material to release an electron. In other words, the ionization potential relates to the ability of a material to be injected with hole. In contrast, the electron accepting property is determined by the LUMO level since an electron is usually injected to the LUMO level of a material. Hence, the ionization potential does not relate to the electron accepting property of a material.

(b) In addition, the current rejection seems to originate from the idea that the pending claims do not require two separate substances in the first layer. Applicants disagree. However, in order to clarify the claimed invention, Applicants have amended the claims to clearly recite the feature that the first layer has at least two separate substances.

Accordingly, it is respectfully submitted that the rejection in the Final Rejection has been overcome, and it is requested that the rejection be withdrawn, and the claims allowed.

Information Disclosure Statement

Applicants are submitting an information disclosure statement (IDS) herewith. As a RCE is being filed herewith, it is respectfully requested that this IDS be entered and considered prior to the issuance of any further action on this application.

Conclusion

It is respectfully submitted that the present application is in a condition for allowance and should be allowed.

If any further fee should be due for this amendment, the IDS, and/or the RCE, please charge our deposit account 50/1039.

Favorable reconsideration is earnestly solicited.

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Respectfully submitted,

/Mark J. Murphy/  
Mark J. Murphy  
Registration No. 34,225

COOK ALEX LTD.  
200 West Adams Street; Suite 2850  
Chicago, Illinois 60606  
(312) 236-8500

Customer No. 26568